WHAT IS CLAIMED IS:

1. A method of forming dual work function metal gate electrodes in a semiconductor device, comprising:

forming a gate dielectric over a substrate;

depositing a mold layer having a first opening therein over said gate dielectric; and

creating a first metal gate electrode by depositing a first metal in said first opening.

2. The method as recited in Claim 1 further including creating a second metal gate electrode over said substrate.

3. The method as recited in Claim 2 wherein creating said second metal gate electrode includes forming a second opening in said mold layer and depositing a second metal in said second opening.

4. The method as recited in Claim 2 wherein creating said second metal gate electrode includes removing said mold layer and forming a second mold layer having a second opening therein and depositing a second metal in said second opening.

5. The method as recited in Claim 4, wherein first and second mold layers have different chemical compositions.

6. The method as recited in Claim 1, wherein said mold layer is selected from the group consisting of

a resist material;

an organic polymer; and

an inorganic material.

7. The method as recited in Claim 1, wherein said mold layer is substantially removed after depositing said first and second metal.

8. The method as recited in Claim 1, wherein said first metal has a work function between about 4 and about 4.2 eV and said second metal has a work function between about 5 and about 5.2 eV.

9. The method as recited in Claim 1, wherein said first metal is selected from the group consisting of:

titanium;

chromium;

manganese;

zirconium;

tantalum;

tantalum nitride; and

mixtures thereof.

10. The method as recited in Claim 1, wherein said first metal is selected from the group consisting of:

cobalt;

nickel;

molybdenum;

ruthenium;

rhodium;

palladium;

rhenium;

iridium;

platinum;

gold; and

mixtures thereof.

11. The method as recited in Claim 2, wherein said creating said first and second metal further includes removing excess first and second metals located above said mold layer.

12. The method as recited in Claim 11, wherein said removing includes chemical mechanical polishing one or both of said first and second metals.

13. The method as recited in Claim 11, wherein said removing includes dry etching one or both of said first and second metals.

14. The method as recited in Claim 1, further including forming source and drain structures that are self-aligned with at least one of said first and second metals.

15. An active device, produced by the process comprising:

forming a gate dielectric over a substrate;

depositing a mold layer having a first opening therein over said gate dielectric; and

creating a first metal gate electrode by depositing a first metal in said first opening.

16. The active device produced by the process recited in Claim 15, further including creating a second metal gate electrode over said substrate by forming a second opening in said mold layer and depositing a second metal in said second opening.

17. The active device produced by the process recited in Claim 15, further including creating a second metal gate electrode over said substrate by removing said mold layer and forming a second mold layer having a second opening therein and depositing a second metal in said second opening.

18. A method of manufacturing an integrated circuit comprising:

forming active devices having dual work function metal gate electrodes over or in a semiconductor substrate including:

forming a gate dielectric over a substrate;

depositing a mold layer having a first opening therein over said gate dielectric; and

creating a first metal gate electrode by depositing a first metal in said first opening;

forming interconnect metals lines on one of more insulating layers located over said active devices; and

connecting said interconnects with said active devices to form an operative integrated circuit.

19. The method as recited in Claim 18, further including creating a second metal gate electrode over said substrate by forming a second opening in said mold layer and depositing a second metal in said second opening.

20. The method as recited in Claim 18, further including creating a second metal gate electrode over said substrate by removing said mold layer and forming a second mold layer having a second opening therein and depositing a second metal in said second opening.